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JUL 16 1964

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
NEVADA

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE.
and

NEVADA DEPARTMENT of CONSERVATION and NATURAL RESOURCES
DIVISION of WATER RESOURCES

Data included in this report were obtained by the agencies named above
in cooperation with the Federal, State and private organizations listed
on the last page of this report.

AS OF
APR. 1, 1964

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 2807, Portland, Oregon 97208.

PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN. 15 - APR. 1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANOS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
NEVADA

Report prepared by

MANES BARTON

and

ROY E. MALSOR, JR.

SOIL CONSERVATION SERVICE
1479 SOUTH WELLS AVENUE
RENO, NEVADA

APRIL 8, 1964

Issued by

CHARLES W. CLEARY, JR.

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
RENO, NEVADA

HUGH A. SHAMBERGER

DIRECTOR
DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES
CARSON CITY, NEVADA

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ALPHABETICAL INDEX TO NEVADA SNOW COURSES

This alphabetical tabulation of snow courses has been prepared to provide readers with rapid access to basic snow survey data. The reader is referred to the "Index to Nevada Snow Courses by basins" and "Nevada Snow Courses" map on the next page for other detailed information such as location, elevation, basin and sub-basin, state and numbering system legend.

SNOW COURSE	NO.	PLATE	SNOW COURSE	NO.	PLATE
AMERICAN BEAUTY	15J17a	9,12	LAMOILLE #3	15J6M	9,12
BAKER #1	14L1	8	LAMOILLE #4	15J7	9,12
BAKER #2	14L2	8	LAMOILLE #5	15J8P	9,12
BAKER #3	14L3	8	LAPON MEAOOW	18L1	5
BALO MOUNTAIN	19H1	15	LAUREL DRAW	16H5	11
BARBER CREEK	20H5	15	LEAVITT MEAOOWS	19L8	5
BEAR CREEK	15H1MA	11,12	LEE CANYON #1	15N4	7
BERRY CREEK	14K2	8	LEE CANYON #2	15N3	7
BIG BENO	15H4MP	11,12	LEONARO CREEK	18H2	14
BIG CREEK CAMPGROUND	17K1	13	LITTLE BALLY MTN.	19H4a	15
BIG CREEK MINE	17K2	13	LITTLE VALLEY	19K3	2
BIG CREEK, UPPER	17K3	13	LOBEEL LAKE	19L17a	5
BIRD CREEK	14K1	8	LOUSE CANYON	17G4a	14
BLUE LAKES	19L5	3,4	LOWER CORRAL	17L1	7,13
BOCA #2	20K14	2,4			
BUCKEYE FORKS	19L11	5	MARLETTE LAKE	19K4M	2,3
BUCKEYE ROUGHS	19L10	5	MARTIN CREEK	17H3	12,14
BUCKSKIN, LOWER	17H2	12,14	MATHEW CANYON	14M1	7
BUCKSKIN, UPPER	17H1	12,14	MIOAS	16H3AP	11,12
CAMPITO MOUNTAIN	18M2	6	MONTGOMERY PASS	18M1	6
CARSON PASS, UPPER	19L4	3,4	MT. GRANT	18L2	5
CAVE CREEK	15J13	8,9,12	MT. ROSE	19K2	2
CEOAR PASS	20H6	15	MURRAY SUMMIT	14K3	8
CENTER MOUNTAIN	19L12A	5	OREGON CANYON	17G5a	14
CLARK CANYON	15N2	7	PINCHOT CREEK	18M3a	6
CLEAR CREEK	19K5	3,4	PINE CANYON	14M2	7
COLUMBIA BASIN	16H6a	11	PIUTE PASS	18M4a	6
CORRAL CANYON	15J12A	9,12	POISON FLAT	19L6A	3,4
OAGGETTS PASS	19L14	2,3,4,	POLE CREEK R. 5.	15H14	10
OENIO CREEK	18G6a	14	QUINN RIOGE	17H6a	14
OISASTER PEAK	18H1	14	RAINBOW CANYON #2	15N7	7
OISMAL SWAMP	20H3a	15	REO POINT	15H18a	10
ONNER LAKE #1	20K11	2	RESERVATION CREEK	20H4	15
ONNER PARK #2	20K21	2	RICHARDSONS #2	20L3	2
ONNER SUMMIT	20K10	2,4	ROBINSON LAKE	15J16a	9,12
ORSEY BASIN	15J1MP	9,12	ROBINSON SUMMIT	15K1	8
ORY CREEK	15J3	9,12	ROOEO FLAT	15H6MP	11,12
EAGLE PEAK	20H7	15	RUBICON #1	20L1	2
EBBETTS PASS	19L18a	3	RUBICON #2	20L2	2
ECHO SUMMIT	20L5	2,3,4	RYAN RANCH	15J2	9,12
FOROYCE LAKE	20K7	2,4	SAGE HEN CREEK	20K6	2,4
49-MTN.	19H3	15	76 CREEK	15H3A	11,12
FOX CREEK	15H2	11	SILVER CREEK #2	14K7	8
FREEL BENCH	19L2	2	SONORA PASS	19L7M	3,5
FRY CANYON	15H7	11,12	SQUAW VALLEY #2	20K19	2
FURNACE FLAT	20K8	2,4	STAG MTN.	15H19a	11,12
GLENBROOK #2	19K6	2,3			
GOAT CREEK	15H13	10	TAHOE CITY	20K16	2,4
GOLCONOA #2	17J2	12	TAYLOR CANYON	15H9MP	11,12
GOLO CREEK	15H5	11,12	TIOGA PASS	19M1	5
GRANITE PEAK	17H4	12,14	TOE JAM	16H7a	11,12
GREEN MOUNTAIN	15J9MP	9,12	TREMewan RANCH	15H8	11,12
HAGANS MEAOOW	19L3M	2,4	TROUGH SPRINGS	15N1	7
HAGER CANYON	15J14	8,9,12	TROUT CREEK	18G5a	14
HARRISON PASS #1	15J10	9,12	TROUT CREEK, LOWER	15H10P	9,12
HARRISON PASS #2	15J11	9,12	TROUT CREEK, UPPER	15H11A	9,12
HAYS CANYON	19H2	15	TRUCKEE #2	20K13M	2
HOLE-IN-MOUNTAIN	15J15	9,12	UPPER CORRAL	17L2	7,13
HUMMINGBIRD SPRINGS	15H15A	10,12	UPPER FISH VALLEY	19L16a	3
INDEPENOENCE CAMP	20K4M	2,4	UPPER TRUCKEE	19L1	2
INDEPENOENCE CREEK	20K3	2	VIRGINIA LAKES	19L13M	5
INDEPENOENCE LAKE	20K5	2	WARD CREEK	20K17M	2,4
JACK CREEK, LOWER	16H1M	11,12	WARD MOUNTAIN #2	14K5	8
JACK CREEK, UPPER	16H2A	11,12	WEBER LAKE	20K2	2
JACKS PEAK	16H4	11,12	WEBER PEAK	20K1	2
JAKES CREEK	14H1	10,13	WET MEAOOWS LAKE	19L17a	3
KALAMAZOO CREEK	14K8	8	WHITE RIVER #1	15L1	8
KYLE CANYON	15N5	7	WILLOW FLAT	19L9	5
LAKE LUCILLE	20L4	2			
LAMANCE CREEK	17H5	12,14			
LAMOILLE #1	15J4	9,12			
LAMOILLE #2	15J5	9,12			

INDEX TO NEVADA SNOW COURSES

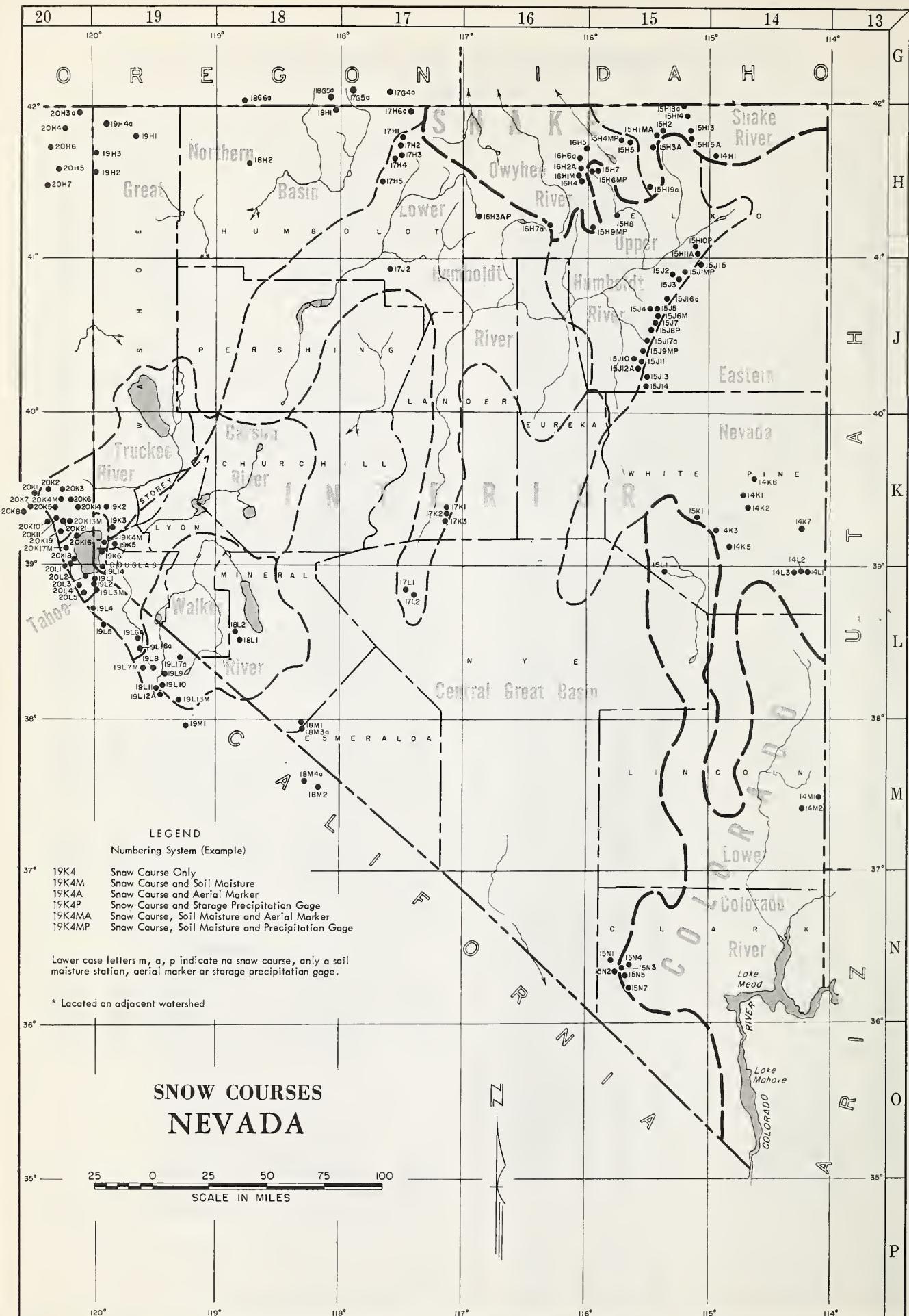
(By Basins)

LEGEND
NUMBERING SYSTEM (EXAMPLE)

9K4 SNOW COURSE ONLY
9K4M SNOW COURSE AND 5 OIL MOISTURE
9K4A SNOW COURSE AND AERIAL MARKER
9K4P SNOW COURSE AND STORAGE PRECIPITATION GAGE
9K4MA SNOW COURSE, SOIL MOISTURE AND AERIAL MARKER
9K4MP SNOW COURSE, SOIL MOISTURE AND PRECIPITATION GAGE

LOWER CASE LETTERS m, b, p, INDICATE NO SNOW COURSE,
ONLY A SOIL MOISTURE STATION, AERIAL MARKER OR STORAGE
PRECIPITATION GAGE.

LOCATED ON ADJACENT WATERSHED



WATER SUPPLY OUTLOOK
FOR NEVADA

April 1, 1964

XX

X X Most Western and Northern Nevada water users will have an adequate X
X water supply this spring and summer. East slope Sierra stream- X
X flow is forecast at 60 to 80 percent of the 1943-57 April-July X
X average on the headwater drainages. Except in Carson Valley near X
X average to above average reservoir stored water will offset most X
X deficiencies. X

X X In contrast to the below average Sierra snowpack, the snowpack in X
X the Humboldt and Owyhee basins is near average to above average. X
X Irrigation season streamflow forecasts range from a high of 100 X
X percent of average on the South Fork Humboldt to 69 percent on the X
X main river at Palisade. X

X X The Central and Southern Nevada mountain snowpack is variable but X
X generally is rated poor. Streamflow will be only fair at the best. X
X

X X On April 1, 1964 Nevada's principal reservoirs held 84 percent of X
X their April 1, 1943-57 average. Mountain and medium elevation X
X soils are well wetted in Western and Northern Nevada. X
X

XX

STREAMFLOW FORECASTS

Tahoe-Truckee river basin April-July 1964 streamflow is forecast to range from 67 to 80 percent of average. Lake Tahoe is forecast to rise 1.00 foot from April 1 assuming gates closed. This is 67 percent of the 1943-57 average. The Truckee Basin Water Committee estimates that the 500 c.f.s. Floriston rate can be maintained through September. This will mean an adequate water supply for irrigation, domestic and municipal uses along the Truckee River.

Carson River streams are forecast to have April-July 1964 flows ranging from 60 percent of average on the East and West Carson to 35 percent at Ft. Churchill where the Carson river empties into Lahontan reservoir.

Walker river streams are forecast at 57 to 64 percent of average.

Humboldt and Snake basin irrigation season forecasts are near average to average. The Owyhee is predicted to flow 81 to 89 percent of the 1943-57 average, South Fork Humboldt - 100 percent, Lamoille - 82 percent, Martin Creek - 82 percent, and Humboldt at Palisade - 69 percent.

RESERVOIR STORAGE

In aggregate Nevada's reservoir storage is near average. April 1, 1964 storage is 84 percent of average and 57 percent of capacity. Wild Horse, Boca, Topaz, and Bridgeport are above average. Lahontan holds 220,000 acre feet which is only 9,000 acre feet below its average. Rye Patch holds 85,000 acre feet which is comparable to last year this date.

RESERVOIR STORAGE (Continued)

Lake Tahoe with 340,000 acre feet is much better than last year when it held 236,000 acre feet on April 1. Lake Tahoe is expected to fall to 6224.5 feet above sea level by the end of September which is 1.5 feet above its rim outlet elevation.

With below normal natural streamflows in prospect this coming summer in Western Nevada, reservoir storage will be reduced at somewhat higher rates than is usual in a normal year.

SOIL MOISTURE CONDITIONS

Mountain soils in Western and Northern Nevada are well wetted. Very little snow melt water will be lost to these soils during the melt period. Mountain soils in Central and Southern Nevada are drier and can only be rated fair to moderately well wetted.

Except in Southern Nevada, spring range forage growth will be fair to good. Some of the higher areas in Northeastern Nevada should have excellent growth. Summer range forage growth will depend to a large measure on good late spring-early summer rainfall.

SNOW COVER

April 1, 1964 water content of snow varies greatly around the state and on the east slope Sierra in California. By basins, the April 1, 1964 snowpack as percent of average is as follows: Walker-Carson-Tahoe - 60%; Truckee - 75%; and Owyhee-Humboldt - 90%.

Many snow courses in the Ruby and Independence and Santa Rosa mountains in Humboldt and Elko counties have above average April 1 water content.

NEVADA STREAMFLOW FORECASTS - APRIL 1, 1964

The following summarized runoff forecasts are based principally on mountain snow cover and the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify their forecasts.

Basin and Forecast Stream	April-July, Streamflow Thousands Acre Feet					
	Forecast 1964	15-Yr. Ave. 1943-57	1964 as % of 15-Yr. Av.	Measured Runoff 1963	Measured Runoff 1962	
<u>TRUCKEE RIVER</u>						
Lake Tahoe	1.00	1.50	67	1.87	1.22	1,3
Little Truckee River above Boca, California	69	86	80	110	99	3
Truckee River at Farad, Cal.	205	255	80	277	261	2,3
<u>CARSON RIVER</u>						
West Carson at Woodfords, Cal.	32	54	59	*	53	
East Carson nr. Gardnerville, Nev.	115	189	61	212	192	
East Carson nr. Gardnerville, Nev. (Date of 200 c.f.s. flow)	7/7	7/22	--	8/5	7/26	
Carson River nr. Carson City, Nev.	70	184	38	218	186	
Carson River at Ft. Chruchill, Nev.	60	171	35	188	167	
<u>WALKER RIVER</u>						
West Walker below E. Fk. nr. Coleville, Calif.	95	148	64	173	155	
East Walker nr. Bridgeport, Calif	35	61	57	88	69	4
<u>COLORADO RIVER</u>						
Virgin River at Virgin, Utah	24	44	55	18	57	5

(Continued)

NEVADA STREAMFLOW FORECASTS APRIL 1, 1964 (Continued)

Basin and Forecast Stream	April-July		Streamflow Thousands		Acre Feet
	Forecast 1964	15-Yr. Av. 1943-57	1964 as % of 15-Yr. Av.	1963	Measured Runoff 1962
<u>HUMBOLDT RIVER</u>					
So. Fk. Humboldt nr. Elko, Nev.	74	74	100	75	97
Lamoille Creek nr. Lamoille, Nev.	23	28	82	30	32
Humboldt River at Palisade, Nev.	155	225	69	216	267
Humboldt River at Comus, Nev.	100	143	70	140	224
Martin Creek nr. Paradise, Nev.	14	17	82	10	21
<u>SNAKE RIVER</u>					
Owyhee River nr. Gold Creek, Nev. ⁶	24	27	89	15	29
Owyhee River nr. Owyhee, Nev. ⁶	70	86	81	70	85
Salmon Falls Creek nr. San Jacinto, Nevada ⁷	90 88	88 85	103 104	70	118 115
<u>SURPRISE VALLEY</u>					
Bidwell Cr. nr. Ft. Bidwell, Cal. ⁸	12.5	16.0**	78	13.3	8.9
Mill Cr. nr. Cedarville, Cal. ⁸	4.8	6.1	79	5.5	3.6
Deep Cr. nr. Cedarville, Cal. ⁸	3.2	4.2	76	4.3	2.4
Eagle Cr. nr. Eagleville, Cal. ⁸	4.5	5.8	78	5.2	4.1

1. Maximum rise, in feet, from April 1, assuming gates closed.
2. Exclusive of Tahoe and corrected for storage in Boca Reservoir.
3. Forecast issued by Truckee Basin Water Committee, composed of Truckee-Carson Irrigation District, Sierra Pacific Power Company and Washoe County Water Conservation District.
4. For period April through August corrected for storage in Bridgeport Reservoir.
5. April-June forecast; issued by SCS, Salt Lake City, Utah.
6. Corrected for storage in Wild Horse Reservoir.
7. March-Sept. and March-July forecasts respectively; issued by SCS, Boise, Idaho.
8. April-Sept. forecast; coordinated forecast of SCS and California Dept. of Water Resources, Snow Survey Units.

* Gage washed out February, 1963; record incomplete.

** Adjusted average.

NEVADA

STATUS OF RESERVOIR STORAGE

APRIL 1, 1964

BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (1000 AF)	USABLE STORAGE - 1000 ACRE FEET			
			1964	1963	1962	APRIL 1 15-YR. AVE. 1943-57
Owyhee	Wild Horse	33	24	21	24	17
Lower Humboldt	Rye Patch	179	85	84	47	115
Colorado	Mohave	1,810	1,663	1,703	1,707	1,492*
Colorado	Mead	27,217	14,609	21,864	18,041	16,437
Tahoe	Tahoe	732	340	263	89	473
Truckee	Boca	41	11	38	3	9
Truckee	Prosser**	29	10	10	Storage began Jan. 30, 1963	
Carson	Lahontan	286	220	262	107	229
West Walker	Topaz	59	53	59	25	45
East Walker	Bridgeport	42	42	42	23	35

* 1950-57

** Flood control use allocation of 20,000a.f. between Nov. 1 and Apr. 10

TOTAL RESERVOIR STORAGE

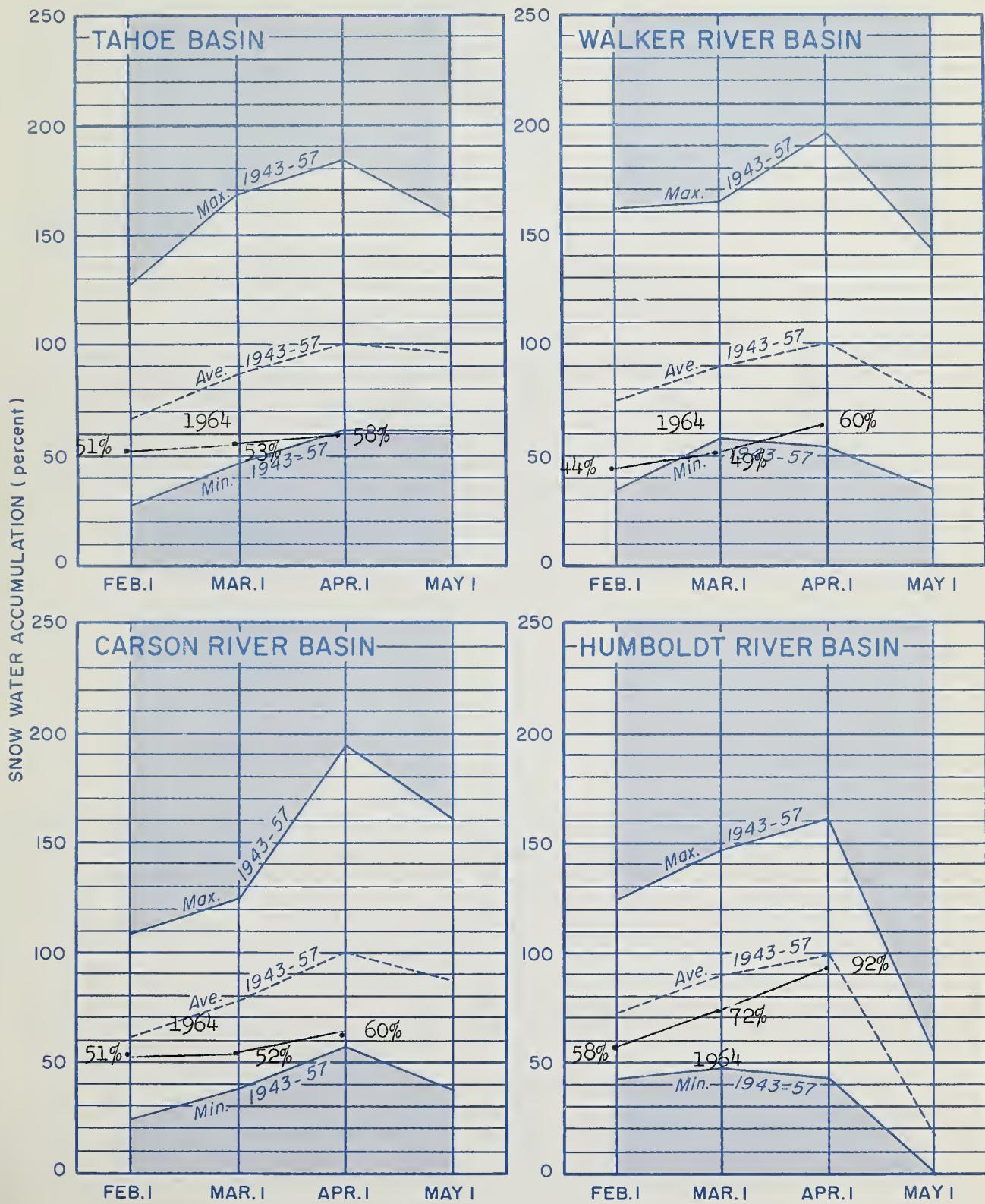
Developed from Wild Horse, Rye Patch, Tahoe, Boca, Lahontan Topaz and Bridgeport Reservoirs in 1000's Acre Feet

MONTH	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	AVERAGE 1943-57
October 1	985	489	263	65	345	707	732
January 1	890	367	206	57	419	756	787
February 1	947	398	218	73	558	784	842
March 1	1,038	494	254	210	696	777	877
April 1	1,066	592	285	318	769	775	923
May 1	1,036	632	300	499	844		971

TOTAL USABLE CAPACITY 1,372

SNOW WATER ACCUMULATION in NEVADA by BASIN

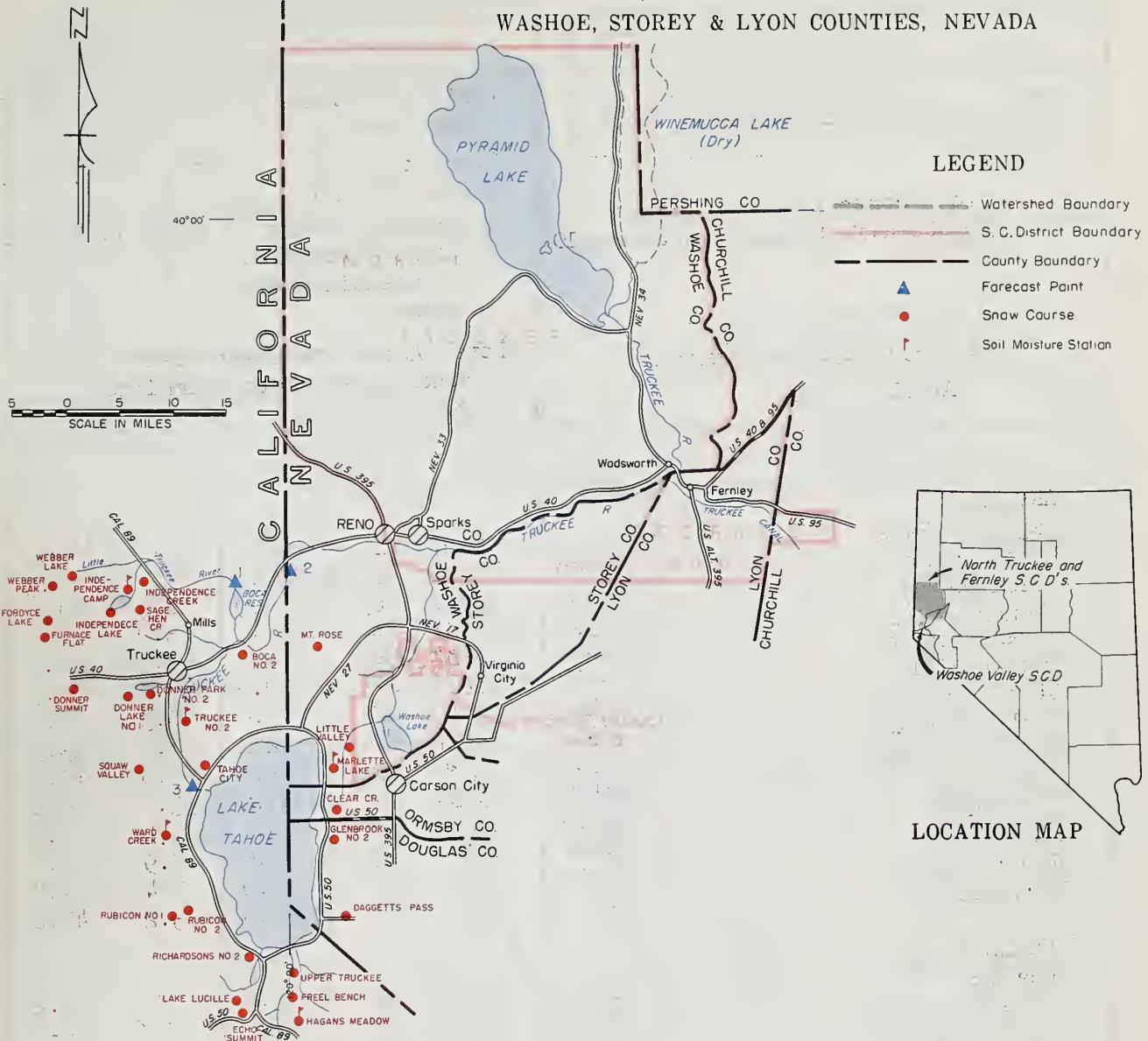
April 1, 1964



SNOW SURVEY & WATER SUPPLY FORECAST

NORTH TRUCKEE, FERNLEY & WASHOE VALLEY S.C.D.'s.

WASHOE, STOREY & LYON COUNTIES, NEVADA



APRIL 1, 1964

The Tahoe-Truckee water supply outlook did not improve during March. The water content of the snow is below normal on all snow courses ranging from 50 to 80 percent of the April 1 average. However, reservoird water will offset the below normal April-July streamflow in prospect this cming irrigation season.

The Truckee Basin Water Committee forecasts Lake Tahoe will rise 1.00 foot from April 1 through the runoff season assuming gates closed, which would raise the Lake to 6,226.81. Donner and Independence Lakes are expected to fill. Boca contained 11,000 acre feet on April 1 and it is estimated that it will fill to its capacity of 40,800 acre feet. Lake Tahoe is projected to drop to about 6224.5 by the end of September, 1964.

The Truckee at Farad is forecast to flow 205,000 acre feet and Little Truckee above Boca at 69,000 acre feet. The committee estimates that the Floriston rate of 500 c.f.s. at the Farad gaging station can be maintained into and possibly through September. This means an adequate water supply for irrigation, domestic and minicipal uses along the Truckee River. Reduced Floriston rates will be in effect during the fall and winter months.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE
Boca	41	11	38	9
Lake Tahoe	732	340	263	473
Prosser ^b	29	10	10	--
b - Flood control use allocation 20,000 a.f. between 11/1 to 4/10				

NOTE:

All averages based on 1943-1957

15 year period. The forecast period

is from April 1 through July 31.

*1943-57 adjusted average

SNOW APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD		
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)
					LAST YEAR	AVERAGE
LAKE TAHOE						
Daggetts Pass	7350	3/27	21	6.8	T	12.1
Echo Summit	7500	3/31	58	20.7	8.5	40.3
Freel Bench	7300	3/31	17	6.9	2.5	11.4*
Glenbrook #2	6900	3/31	21	6.1	3.0	14.5
Hagans Meadow	8000	3/31	28	10.8	6.6	19.0*
Lake Lucille	8400	3/30	104	39.9	29.9	62.9
Little Valley	6300	4/1	16	4.6	0.3	8.4
Marlette Lake	8000	3/27	41	12.2	7.0	23.3
Richardsons #2	6500	3/30	36	11.9	1.8	17.8*
Rubicon #1	8100	3/30	98	35.2	33.4	50.2*
Rubicon #2	7500	3/30	50	19.8	11.4	31.5*
Tahoe City	6250	4/1	19	9.6	2.9	11.4
Upper Truckee	6400	3/31	14	5.9	1.4	7.4*
Ward Creek	7000	4/1	80	30.6	13.2	48.2*
TRUCKEE RIVER						
Boca #2	5900	4/2	11	3.3	T	5.2*
Donner Park #2	6000	4/2	47	16.4	6.6	--
Donner Summit	6900	3/26	76	30.2	6.1	39.7
Fordyce Lake	6500	3/26	91	32.7	6.9	41.2
Furnace Flat	6600	3/26	103	38.4	8.0	47.6*
Independence Camp	7000	4/2	47	16.2	6.2	24.2
Independence Creek	6500	4/2	30	9.7	3.7	15.5
Independence Lake	8450	4/2	83	32.7	27.4	41.9
Mt. Rose	9000	3/27	64	19.6	23.0	34.9
Sage Hen Creek	6500	4/3	41	13.8	5.0	18.9
Squaw Valley #2	7500	4/3	93	36.2	19.4	50.6*
Truckee #2	6400	4/3	32	11.6	4.7	17.1*
Webber Lake	7000	3/27	70	23.7	12.2	33.9
Webber Peak	8000	3/27	93	35.4	20.5	43.9

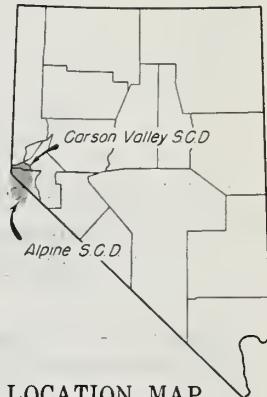
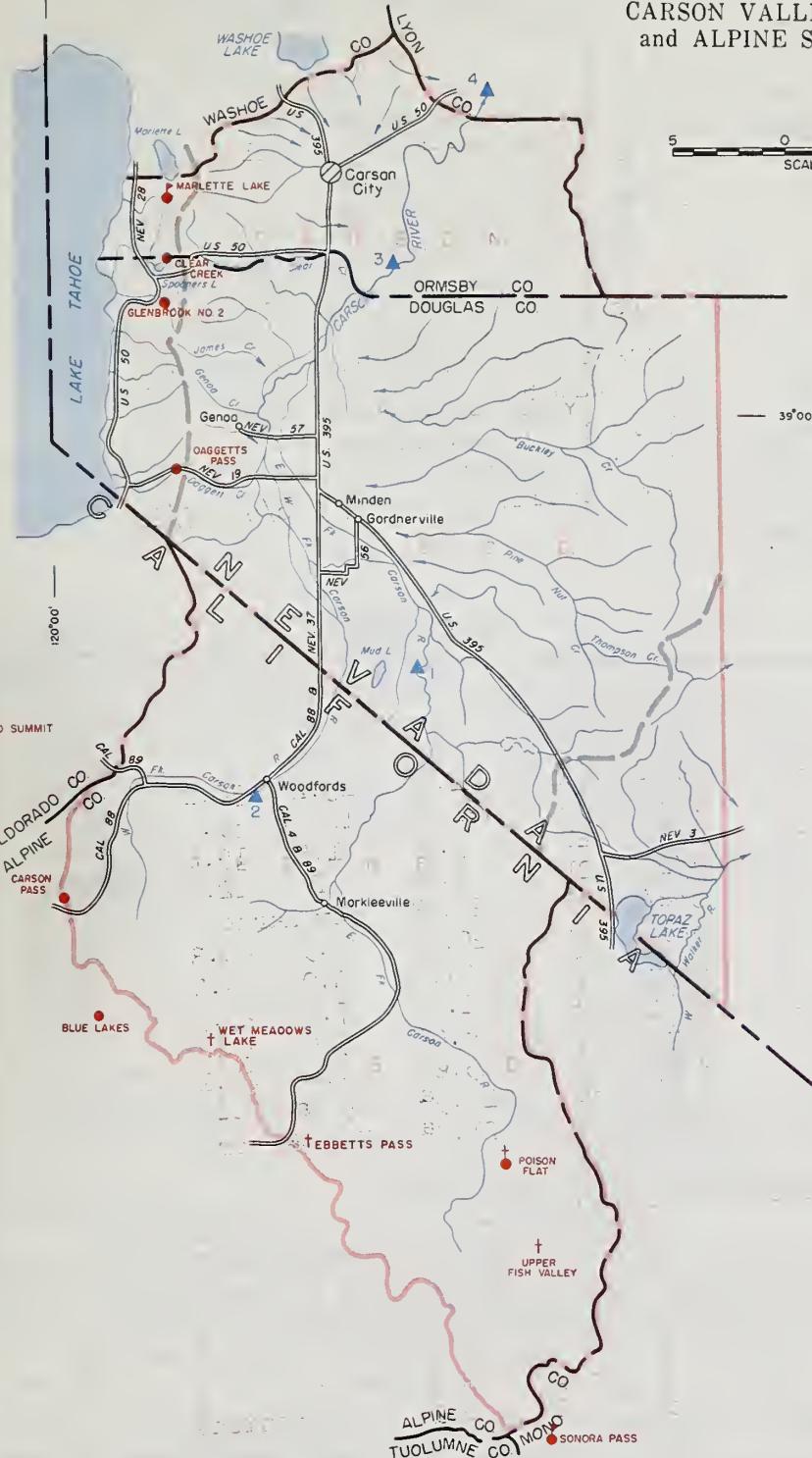
SOIL MOISTURE

STATION	PROFILE (Inches)			SOIL MOISTURE (Inches)		
	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION					
Hagans Meadow	8000	36	3.65	3/31	3.5	
Independence Camp	7000	34	6.10	4/2	5.7	New
Marlette Lake	8000	50	3.70	3/27	3.6	
Truckee #2	6400	18	3.65	4/3	3.3	Stations
Ward Creek	7000	49	5.80	4/1	5.6	

SNOW SURVEY & WATER SUPPLY FORECAST

CARSON VALLEY S.C.D., NEVADA
and ALPINE S.C.D., CALIFORNIA

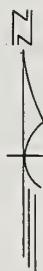
5 0 5 10
SCALE IN MILES



LOCATION MAP

LEGEND

- Watershed Boundary
- S. C. District Boundary
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- Soil Moisture Station



APRIL 1, 1964

A below normal water supply is in prospect for Carson Valley water users this summer. April-July, 1964 streamflow forecasts range from about 60 percent of average at the East and West Fork Carson gaging stations to 35 percent of average at Ft. Churchill.

The March increase in the Carson Basin snowpack was poor in the order of 35 percent of average. The April 1, 1964 Carson snowpack is 60 percent of average.

The East Carson near Gardnerville is forecast to flow 115,000 acre feet during April-July, 1964 which is 61 percent of average. The East Carson is predicted to fall to 200 c.f.s. on July 7 which is 15 days earlier than average.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE
Lahontan	286	220	262	229

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

* 1943-57 adjusted average

b - Gage washed out Feb., 1963.
Record incomplete.

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
1. East Carson near Gardnerville	115	212	189
2. West Carson at Woodfords, Calif.	32	b	54
3. Carson River near Carson City	70	218	184
4. Carson River at Ft. Chruchill	60	188	171
Date 200 d.f.s. flow E. Carson near Gardnerville	7/7	8/5	7/22

SNOW
APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD		
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	AVERAGE
Blue Lakes	8000	3/31	62	22.5	13.2	36.1
Carson Pass, Upper	8600	3/25	69	21.6	18.5	35.4
Clear Creek	7300	4/1	20	5.9	1.5	15.0*
Daggetts Pass	7350	3/27	21	6.8	T	12.1
Ebbetts Pass	8700	3/27	70	24.5 ^a	New Marker	
Echo Summit	7500	3/31	58	20.7	8.5	40.3
Glenbrook #2	6900	3/31	21	6.1	3.0	14.5
Marlette Lake	8000	3/27	41	12.2	7.0	23.3
Poison Flat	7900	3/27	19	6.6 ^a	5.5 ^a	15.8
Sonora Pass	8800	3/26	46	15.0	14.8	24.1
Upper Fish Valley	8050	3/27	30	10.5 ^a	5.5 ^a	--
Wet Meadow Lake	8100	3/27	60	21.0 ^a	New Marker	

a - Aerial snow depth gage; water content estimated

SOIL MOISTURE

STATION	PROFILE (Inches)		SOIL MOISTURE (Inches)					
	NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Marlette Lake	8000	50	3.70	3/27	3.6			
Sonora Pass	8800	48	8.30	2/24	8.1 ^a			

^a - Nearest current data available

(continued from front)

West Carson at Woodfords is forecasted to flow 32,000 acre feet during April-July or 59 percent of average. April-July streamflow on the main river stations at Carson City and Ft. Chruchill is forecast at 70,000 (38%) and 60,000 (35%) acre feet respectively.

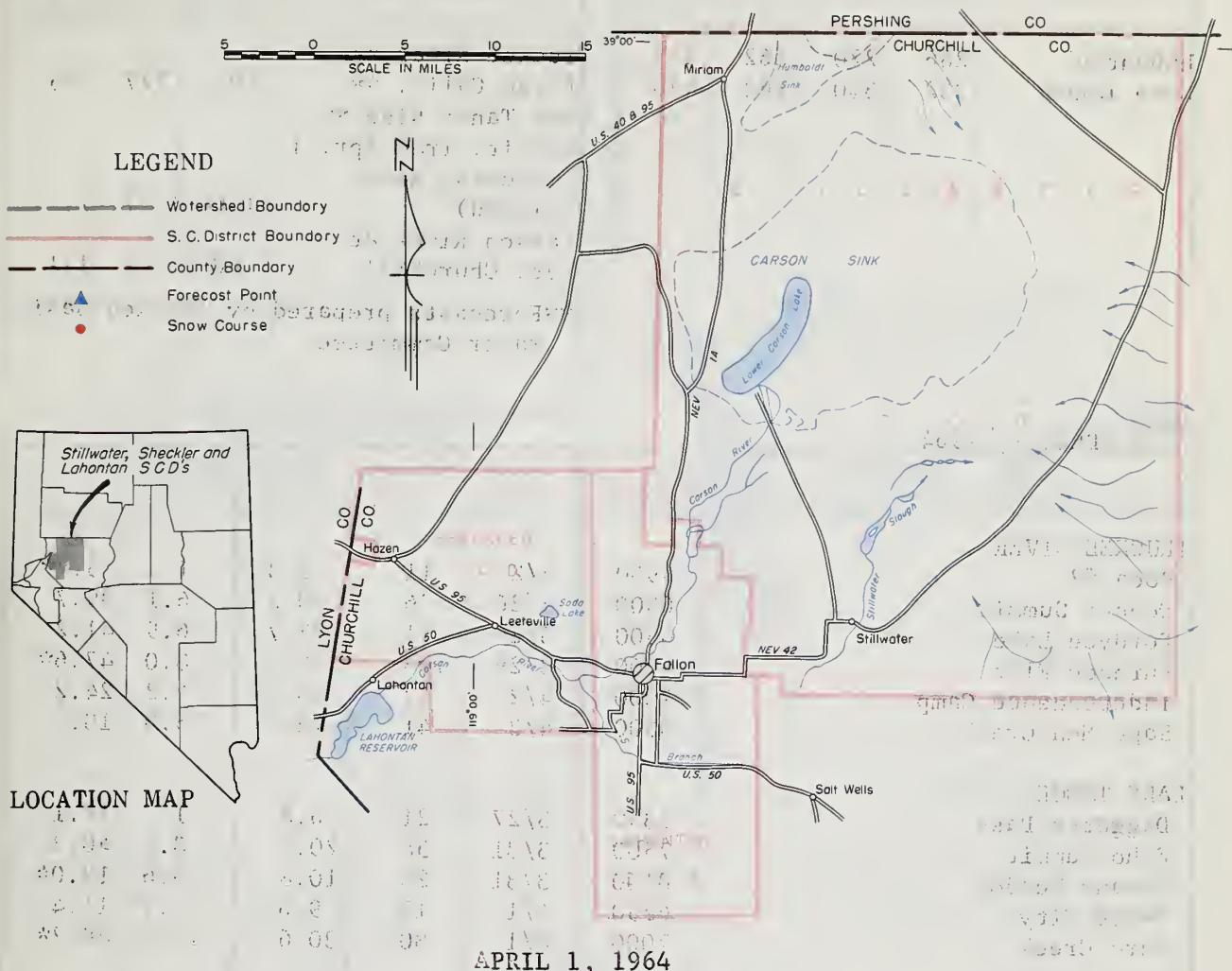
Mountain soils are well wetted and will require very little snow melt water to become saturated.

Lahontan Reservoir held 220,000 acre feet on April 1, 1964. This is 96 percent of average and 77 percent of capacity.

SNOW SURVEY & WATER SUPPLY FORECAST

STILLWATER, SHECKLER, LAHONTAN S.C.D.'S. & VICINITY

CHURCHILL COUNTY, NEVADA



Water users in the Fallon area will have a reasonably adequate 1964 irrigation season water supply. Although the Carson-Tahoe-Truckee April 1, 1964 snowpack is only 60 to 75 percent of average, reservoird water will offset most stream-flow deficiencies.

Lahontan held 220,000 acre feet on April 1, 1964 compared to its average of 229,000 acre feet and its capacity of 286,000 acre feet. Lake Tahoe held 340,000 acre feet on the same date. This is 83,000 acre feet more than April 1, 1963.

Lake Tahoe is forecast to rise 1.00 foot from April 1, 1964 assuming gates closed. The Truckee Basin Water Committee forecasts the Floriston rate of 500 c.f.s. can be maintained, through September, 1964. They anticipate the Lake will drop to 6224.5 by the end of September, which is 1.5 feet above its rim elevation.

The Truckee at Farad is expected to flow 205,000 acre feet during April-July which is 80 percent of the 1943-57 April-July average. During the same time period a flow of 60,000 acre feet (35%) is forecast for Carson River at Ft. Churchill.

Mountain soils are wet and very little snow melt water will be required to bring them to field capacity.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE
Lahontan	286	220	262	229
Lake Tahoe	732	340	263	473

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
Truckee River at Farad Calif. **	205	277	255
Lake Tahoe Rise ** (In ft. from Apr. 1 assuming gate closed)	1.00	1.87	1.50
Carson River at Ft. Churchill	60	188	171
**Forecasts prepared by Truckee Basin Water Committee			

SNOW APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION				PAST RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)
					LAST YEAR	AVERAGE
TRUCKEE RIVER						
Boca #2	5900	4/2	11	3.3	T	5.2*
Donner Summit	6900	3/26	76	30.2	6.1	39.7
Fordyce Lake	6500	3/26	91	32.7	6.9	41.2
Furnace Flat	6600	3/26	103	38.4	8.0	47.6*
Independence Camp	7000	4/2	47	16.2	6.2	24.2
Sage Hen Creek	6500	4/3	41	13.3	5.0	18.9
LAKE TAHOE						
Daggetts Pass	7350	3/27	21	6.8	T	12.1
Echo Summit	7500	3/31	58	20.7	8.5	40.3
Hagans Meadow	8100	3/31	28	10.8	6.6	19.0*
Tahoe City	6250	4/1	19	9.6	2.9	11.4
Ward Creek	7000	4/1	80	30.6	13.2	48.2*
CARSON RIVER						
Blue Lakes	8000	3/31	62	22.5	13.2	36.1
Carson Pass, Upper	8600	3/25	69	21.6	18.5	35.4
Clear Creek	7300	4/1	20	5.9	1.5	15.0
Poison Flat	7900	3/27	19	6.6 ^a	5.5a	15.8
Sonora Pass	8800	3/26	46	15.0	14.8	24.1

a Aerial snow depth gage; water content estimated.

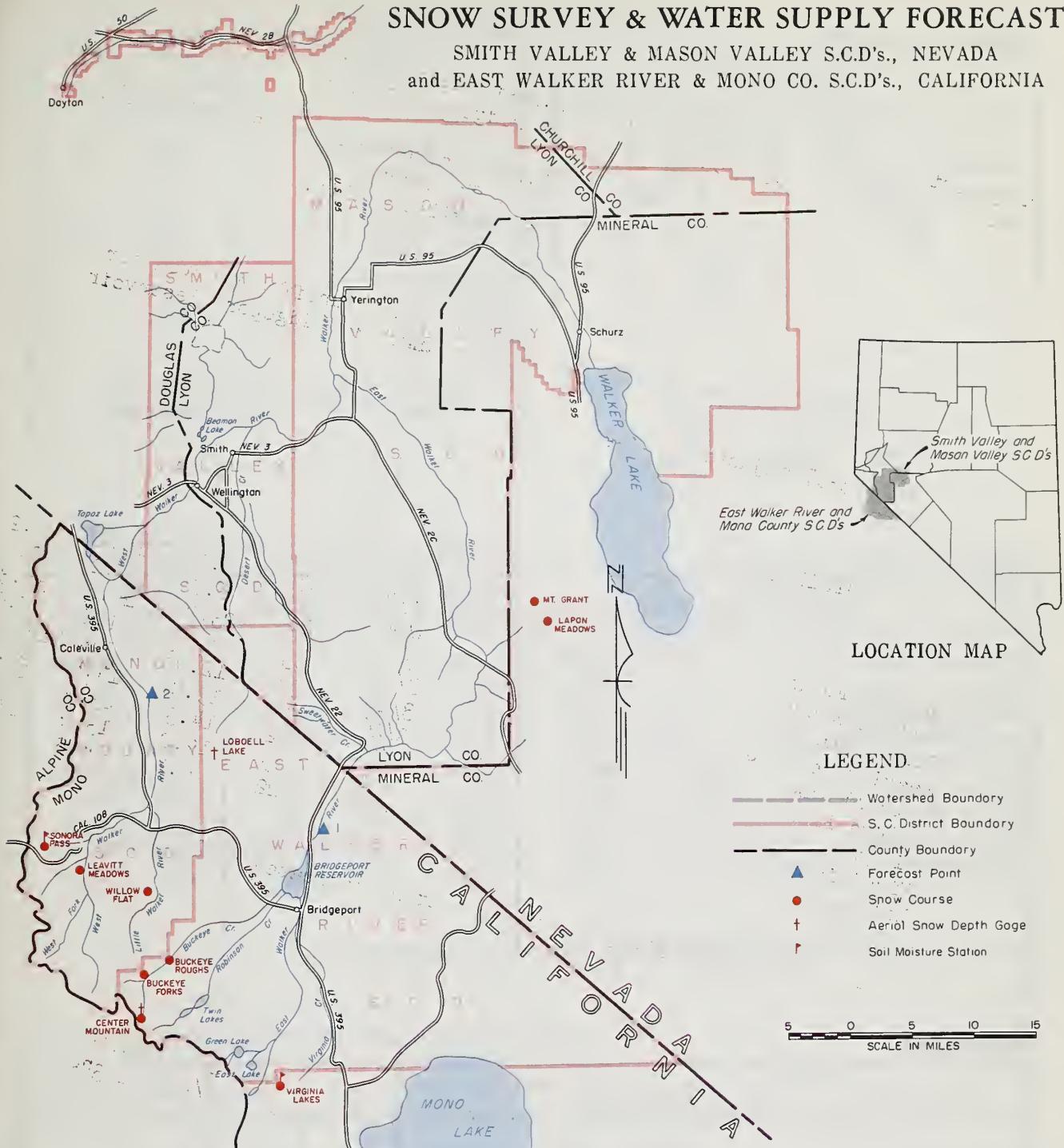
SOIL MOISTURE

STATION	PROFILE (Inches)			SOIL MOISTURE (Inches)				
	NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Hagans Meadow	8000	36	3.65	3/31	3.5	New		
Independence Camp	7000	34	6.10	4/2	5.7	Stations		
Marlette Lake	8000	50	3.70	3/27	3.6			
Sonora Pass	8800	48	8.30	2/24	8.1 ^b			
Truckee #2	6400	18	3.65	4/3	3.3			
Ward Creek	7000	49	5.80	4/1	5.6			

b - Nearest Current data available.

SNOW SURVEY & WATER SUPPLY FORECAST

SMITH VALLEY & MASON VALLEY S.C.D.'s., NEVADA
and EAST WALKER RIVER & MONO CO. S.C.D.'s., CALIFORNIA



LEGEND

- Watershed Boundary
- S.C. District Boundary
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- Soil Moisture Station

5 0 5 10 15
SCALE IN MILES

April 1, 1964

Below normal irrigation season streamflow is forecast during the coming spring and summer months on the East and West Walker Rivers above Bridgeport and Topaz Reservoirs. A reasonably ample irrigation season water supply will be available to water users in Smith Valley and Mason Valley due to excellent reservoir storage in Topaz and Bridgeport.

East Walker is forecast to flow 35,000 acre feet during April-August, 1964 or 57% of average. Bridgeport reservoir held 42,000 acre feet on April 1.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE
Bridgeport	42	42	42	35
Topaz	59	53	59	45

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
1. East Walker near Bridgeport, Cal.**	35	88	61
2. West Walker below E. Fk. near Coleville, Calif.	95	173	148

NOTE:

All averages based on 1943-1957 15 year period. The forecast period is from April 1 through July 31.

* 1943-57 adjusted average

** Apr-Aug. runoff corrected for change in Bridgeport Reservoir

SNOW

APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD		
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)
						LAST YEAR
Buckeye Forks	8500	3/30	37	11.7	10.1	20.2*
Buckeye Roughs	7900	3/30	30	8.7	7.2	20.4
Center Mountain	9400	3/30	67	23.2	24.6	38.3*
Leavitt Meadows	7200	3/26	13	6.0	1.1	7.0*
Lobdell Lake	9200	3/27	37	12.9 ^a	New Marker	
Sonora Pass	8800	3/26	46	15.0	14.8	24.1
Tioga Pass	9900	3/31	42	14.3	23.9	24.9
Virginia Lakes	9500	3/25	35	10.2	13.9	18.0*
Willow Flat	8250	3/25	22	6.1	6.5	10.3*

a - Aerial snow depth gage; water content estimated.

SOIL MOISTURE

STATION	PROFILE (Inches)			SOIL MOISTURE (Inches)		
	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION					
Sonora Pass	8800	48	8.30	2/24	8.1 ^b	
Virginia Lakes	9500	46	6.05	2/24	1.3 ^{bc}	New Stations

b - Nearest current data available

c - Questionable value - subject to change

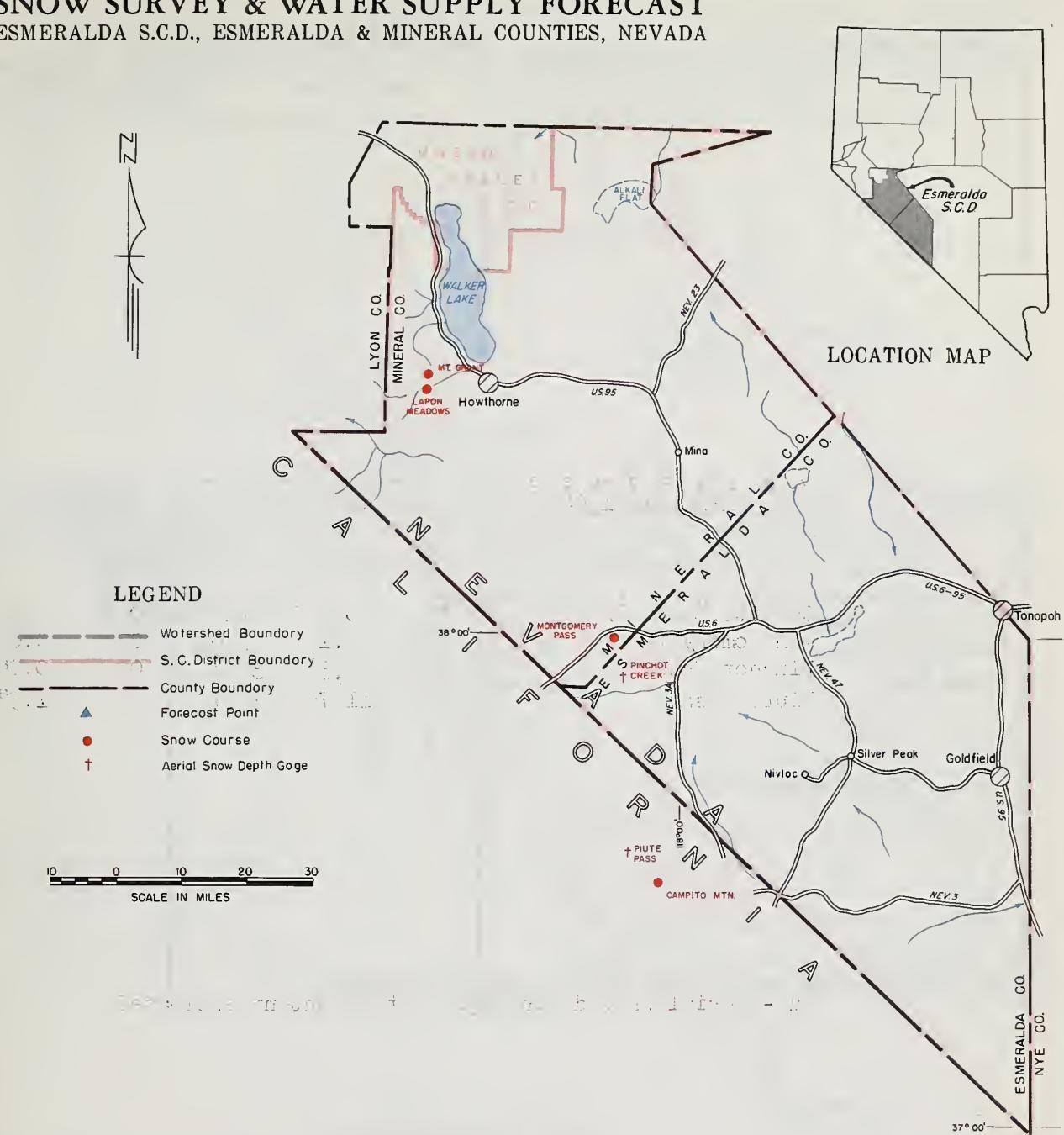
(continued from front)

The West Walker near Coleville is forecast to flow 95,000 acre feet during April-July, which is 64% of its 1943-57 average. Topaz gained 3,000 acre feet during March and currently holds 50,000 acre feet.

Snow fall during March in the Walker River Mountains was normal. However, in aggregate the mountain snowpack is only 60% of the April 1 average.

SNOW SURVEY & WATER SUPPLY FORECAST

ESMERALDA S.C.D., ESMERALDA & MINERAL COUNTIES, NEVADA



APRIL 1, 1964

The White Mountain snowpack as of April 1, 1964 is very poor. The only snow reported was at the Piute Pass aerial marker where 5 inches of snow with an estimated 1.5 inches of water was observed.

There has been very little snow in the White Mountains at any time this winter.

Ground water recharge from the White Mountains into Fish Lake Valley will be poor this year.

STORAGE (1,000 Ac. Ft.)

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE

FORECAST POINT	FORECAST THIS YEAR	MEASURED	
		LAST YEAR	AVERAGE

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

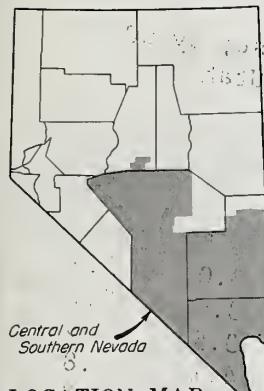
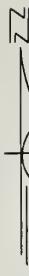
SNOW APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)
Campito Mountain	10,200	4/1	0	0.0	5.4
Montgomery Pass	7,100	3/30	0	0.0	1.9
Pinchot Creek	9,300	3/27	0	0.0a	0.0a
Piute Pass	11,700	3/27	5	1.5a	15.5a

a - Aerial snow depth gage; water content estimated

SNOW SURVEY & WATER SUPPLY FORECAST

CENTRAL and SOUTHERN NEVADA
CLARK, LINCOLN & NYE COUNTIES, NEVADA



LOCATION MAP

LEGEND

- Watershed Boundary
- S.C. District Boundary
- County Boundary
- Forecast Point

Snow Course

20 0 20 40 60
SCALE IN MILES

APRIL 1, 1964

Snowpack in the Charleston Mountains is better than last year but still is much below average at 39 percent.

Groundwater recharge from the Spring Mountains will be poor this year.

Pine and Mathew canyon snow courses near Caliente are bare. On the upper Reese River the corral courses are almost bare.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE
Mead	27,220	14,609	21,864	16,440
Mohave	1,810	1,663	1,703	1,492*
**Storage began in 1950				

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

*1943-57 adjusted average

SNOW APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD		
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)
					LAST YEAR	AVERAGE
Clark Canyon	9000	3/26	12	3.0	2.5	8.5*
Kyle Canyon	3200	3/27	11	3.0	2.7	9.5*
Lee Canyon #1	3300	3/27	10	3.5	1.9	8.0
Lee Canyon #2	9000	3/27	18	4.1	3.8	9.6*
Lee Canyon #3	8400	3/27	13	3.3	2.2	--
Rainbow Canyon #2	3100	3/27	25	7.0	5.6	16.0*
Trough Springs	3500	3/26	7	1.7	1.5	6.2*
MEADOW VALLEY SCD						
Mathew Canyon	6200	4/1	0	0.0	0.0	0.5*
Pine Canyon	6000	4/1	0	0.0	0.0	0.8*
TONOPAH SCD						
Lower Corral	7500	4/1	0	0.0	0.0	1.4*
Upper Corral	8500	4/1	2	0.4	0.7	3.6*

(continued from front)

The Virgin River at Virgin, Utah is forecast to flow 24,000 acre feet or 55 percent of average during April-June. Water users on the lower Virgin River in the Mesquite-Bunkerville area will have a fair water year. This is better than last year when only 18,000 acre feet occurred as runoff.

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
Virgin River at Virgin, Utah	24	18	44

April-June forecast; by SCS
Salt Lake City, Utah

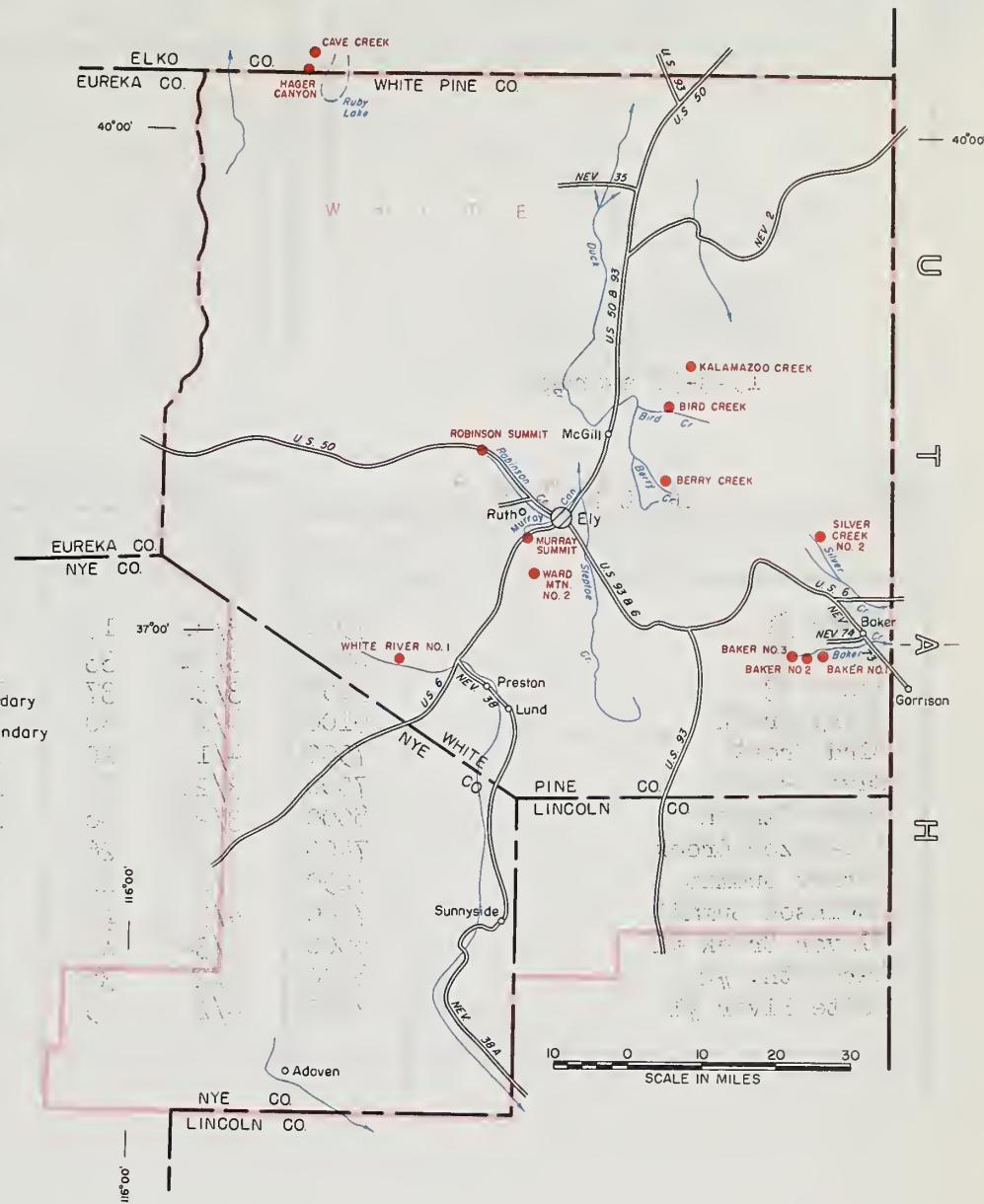
SNOW SURVEY & WATER SUPPLY FORECAST

WHITE PINE S.C.D., WHITE PINE, LINCOLN & NYE COUNTIES, NEVADA



LEGEND

- Watershed Boundary
- S.C. District Boundary
- County Boundary
- Forecast Point
- Snow Course



APRIL 1, 1964

Irrigation season streamflow from the Sohell Creek and Snake Ranges will be poor to fair this year. Mountain snowpack is much below average at the higher elevations but near average at the lower elevations. The early season runoff from low snow will be fair with the later season runoff being poor.

In the Baker Creek Area the mountain snowpack is 66% of the April 1 average with the low elevation snow near average and the high elevation snow about 50 percent of average.

To the north on the east slope of the Ruby's, streamflow is expected to be good. The snowpack at two courses above the Ruby Lake wildlife refuge is 112 percent of average.

Water users should utilize good irrigation practices this year in view of the limited water supply.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

* 1943-57 average

SNOW

APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD		
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)
					LAST YEAR	AVERAGE
Baker #1	7950	3/31	19	6.0	2.2	6.5
Baker #2	8950	3/31	33	9.4	8.7	17.7
Baker #3	9250	3/31	37	10.2	10.1	19.5
Berry Creek	9100	4/1	40	11.3	8.3	18.9*
Bird Creek	7500	4/1	10	2.7	1.4	3.6*
Cave Creek	7500	3/29	54	19.2	4.4	14.1*
Hager Canyon	8000	3/29	48	17.9	9.0	20.4*
Kalamazoo Creek	7400	3/27	26	7.3	1.6	--
Murray Summit	7250	4/2	12	3.3	0.0	3.0
Robinson Summit	7600	4/3	16	2.8	0.0	2.2*
Silver Creek #2	8000	3/30	19	5.9	3.3	8.3*
Ward Mtn. #2	8900	4/2	34	8.2	3.9	20.2*
White River #1	7400	4/2	5	2.1	0.0	--

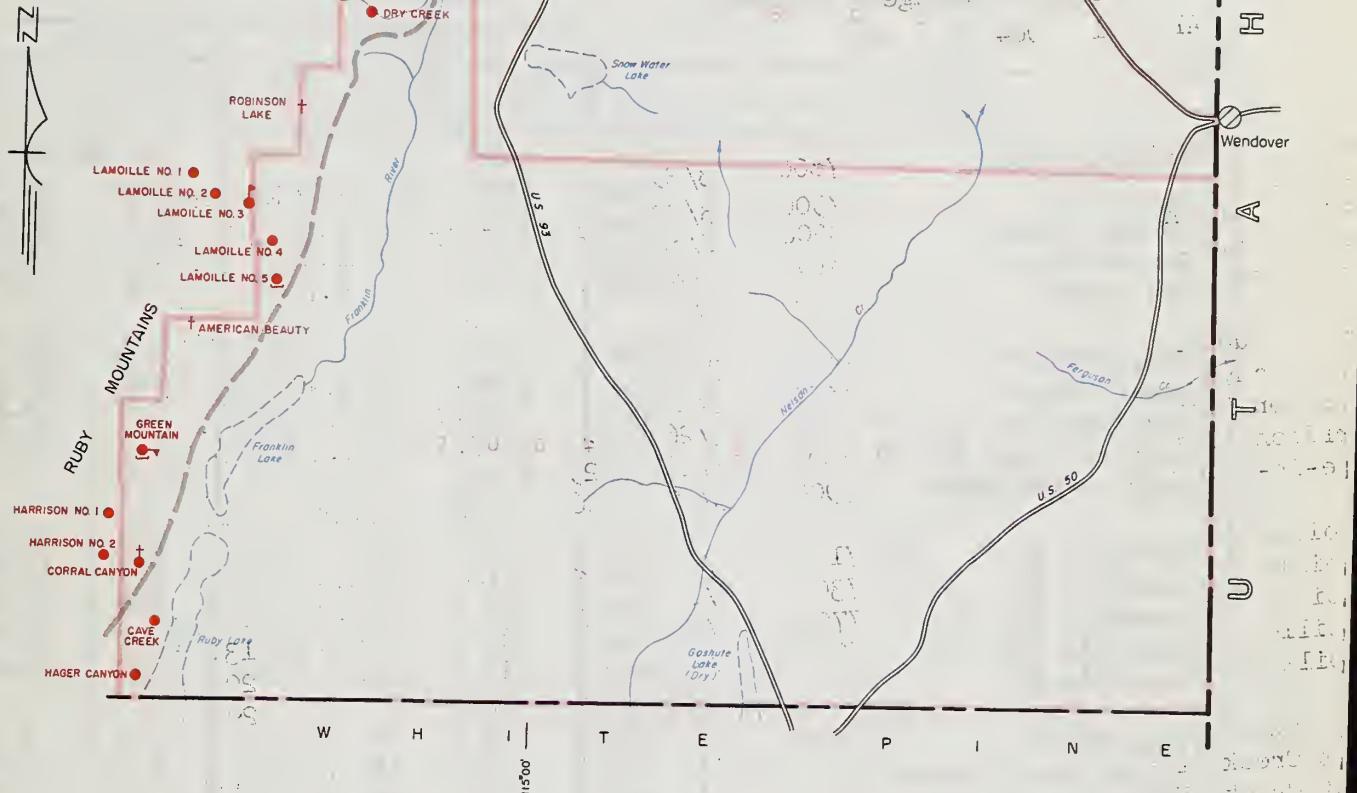
SNOW SURVEY & WATER SUPPLY FORECAST

CLOVER & RUBY S.C.D.'s., ELKO COUNTY, NEVADA



LEGEND

- Watershed Boundary
- S. C. District Boundary
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- Soil Moisture Station
- Storage Precipitation Gage



APRIL 1, 1964

The April 1 mountain snowpack in the Ruby's is 80-85 percent of average this year. Streamflow from the east slopes of the Ruby's will be fair to good this year.

Cave Creek and Hager Canyon snow courses located above the Ruby Lake Wildlife Refuge are 112 percent of their April 1 average.

Ranchers in the Clover Valley and Ruby Valley SCD's will have a good spring season water supply and a fair summer season water supply.

Ruby Lake Wildlife Refuge water supply should be good to excellent.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED	
		LAST YEAR	AVERAGE

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

* 1943-57 adjusted average

SNOW

APRIL 1, 1964

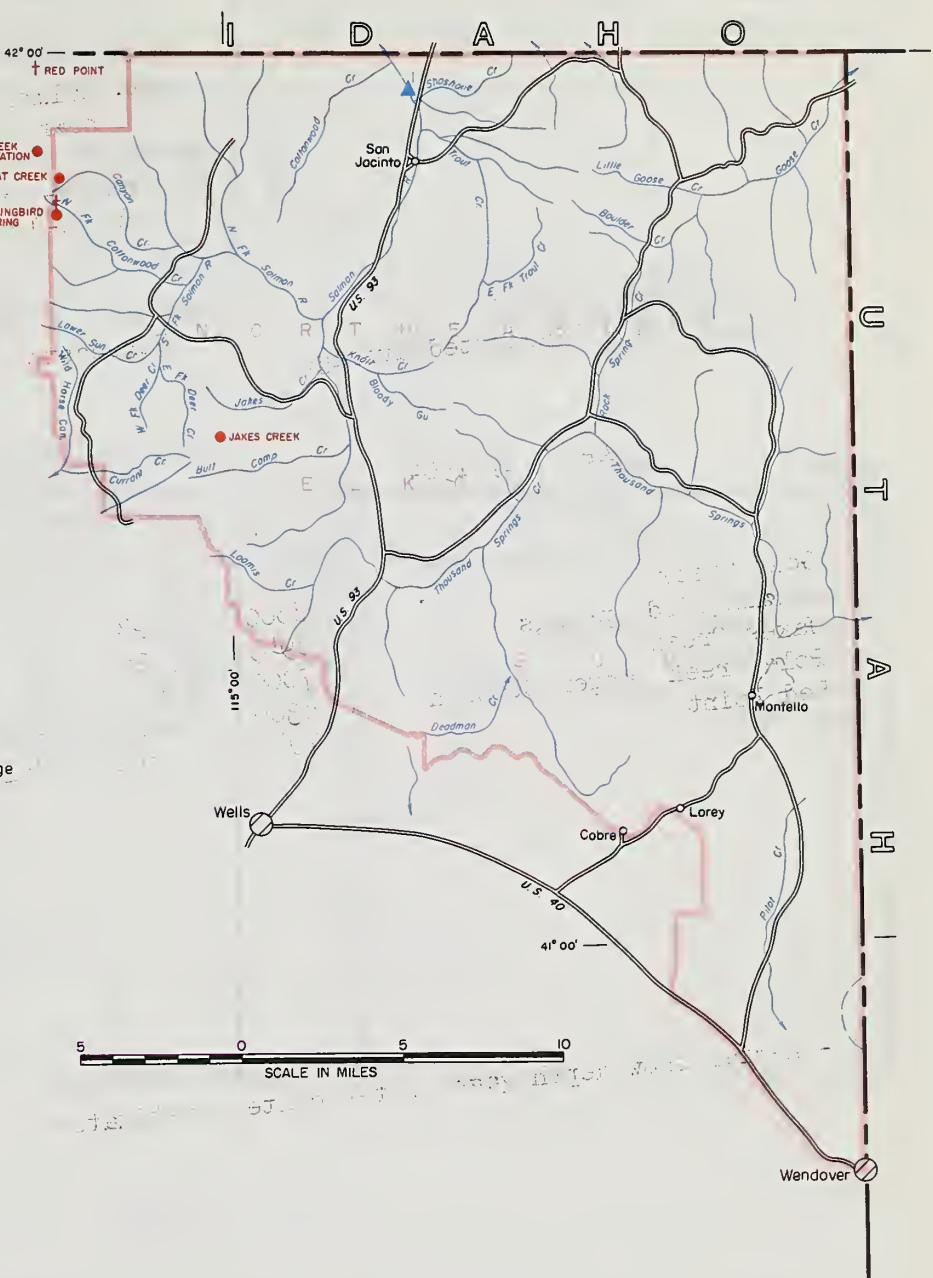
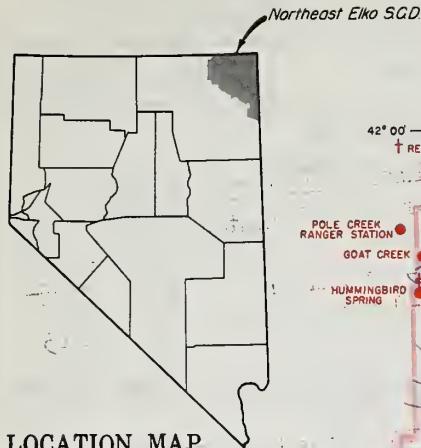
SNOW COURSE	CURRENT INFORMATION				PAST RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)
					LAST YEAR	AVERAGE
American Beauty	7800	3/29	30	10.0a	New	Marker
Cave Creek	7500	3/29	54	19.2	4.4	14.1*
Corral Canyon	8500	3/31	50	16.6	11.5	21.1*
Dorsey Basin	8100	4/2	36	11.2	6.2	14.9*
Dry Creek	6500	4/2	11	3.5	1.2	3.7*
Green Mountain	8000	3/26	44	12.8	8.3	13.8*
Hager Canyon	8000	3/29	48	17.9	9.0	20.4*
Harrison Pass #1	6600	3/26	28	7.9	0.8	2.8*
Harrison Pass #2	7400	3/26	29	8.4	1.3	3.6*
Hole-in-Mountain	7900	3/30	56	22.5	12.0	--
Lamoille #1	7100	4/1	32	9.7	3.9	10.6*
Lamoille #2	7300	4/1	31	8.8	3.7	10.3*
Lamoille #3	7700	4/1	34	11.1	8.8	13.8*
Lamoille #4	8000	4/1	47	15.5	12.8	20.4*
Lamoille #5	8700	4/1	63	22.2	20.0	29.6*
Ryan Ranch	5800	4/2	0	0.0	0.7	1.1*
Trout Creek, Lower	6900	4/1	12	3.6	0.7	3.9*
Trout Creek, Upper	8500	4/1	54	17.8	13.3	24.9*

a - Aerial snow depth gage; water content estimated.

9-65-1

SNOW SURVEY & WATER SUPPLY FORECAST

NORTHEAST ELKO S.C.D., ELKO COUNTY, NEVADA



APRIL 1, 1964

Mountain snowpack in the Northeast Elko SCD is 93 percent of the April 1, 1943-57 average. Mountain soil moisture is good. With normal spring precipitation, irrigation season runoff will be average.

Salmon Falls Creek near San Jacinto is forecast to flow 88,000 acre feet during March-July which is 104 percent of average. Last year Salmon Falls Creek flowed 70,000 acre feet during the March-September period.

Range forage growth during the spring months will be good.

Plate 10

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
1. Salmon Falls Cr. near San Jacinto			
March-September	90	118	88
March-July	88	115	85
Forecasts issued by SCS, Boise, Idaho			

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

* 1943-57 adjusted average

SNOW

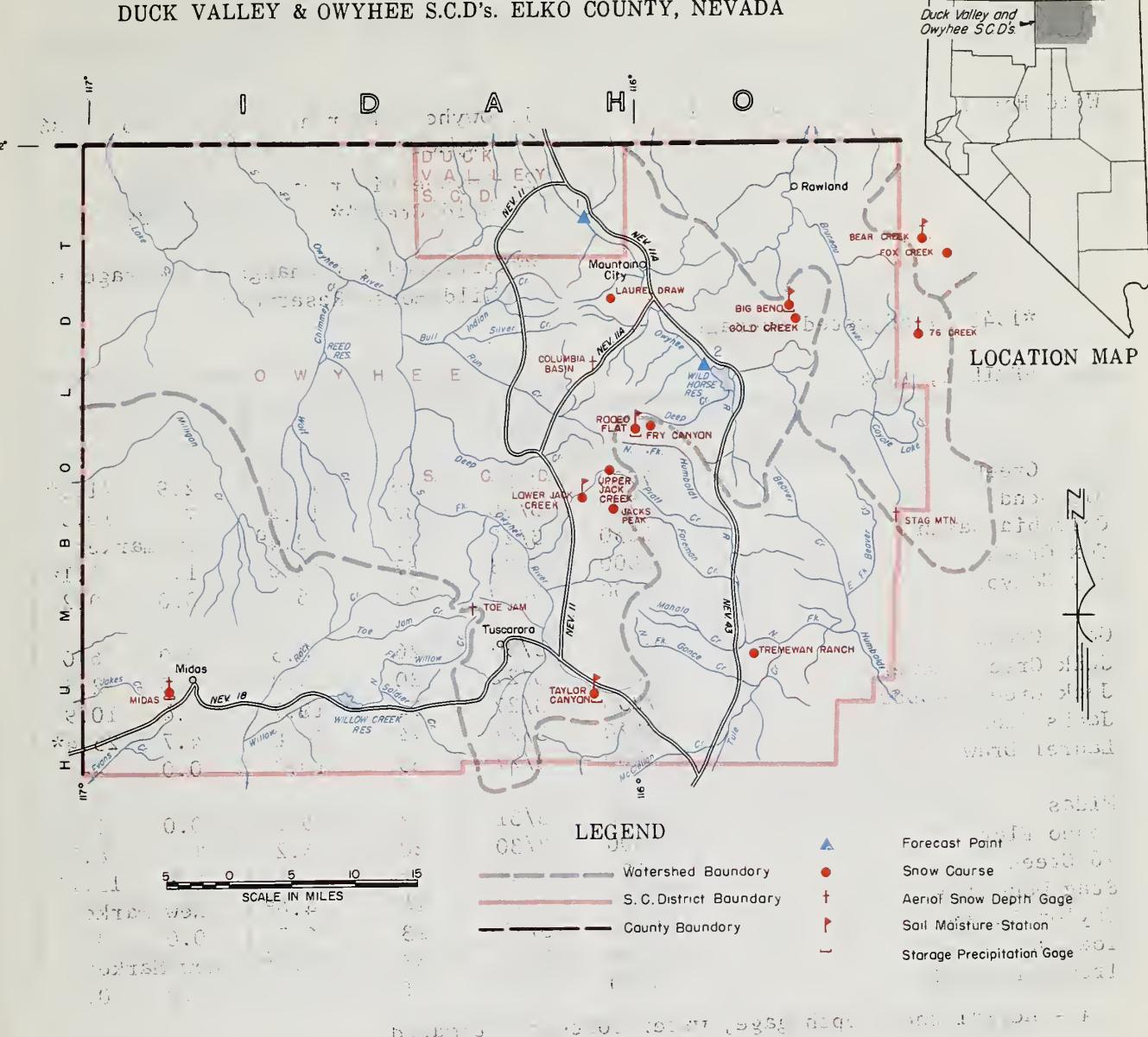
APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)
					LAST YEAR
Goat Creek	8800	3/28	56	15.2	12.8
Hummingbird Springs	8945	3/28	66	21.1	15.1
Jakes Creek	7000	4/1	6	2.3	0.0
Pole Creek Ranger Station	8300	3/28	64	21.6	13.8
Red Point	7940		Report delayed		2.0a

a - Aerial snow depth gage; water content estimated.

SNOW SURVEY & WATER SUPPLY FORECAST

DUCK VALLEY & Owyhee S.C.D.'s. ELKO COUNTY, NEVADA



APRIL 1, 1964

Mountain snowpack in the Owyhee and Duck Valley SCD's is near average to above average. Snow at the lower elevations is good for this time of the year. Water users will have an ample water supply this coming spring and summer.

Wild Horse Reservoir held 24,000 acre feet on April 1, which is 7,000 acre feet above average. With the anticipated flows Wild Horse will fill and spill this year.

The Owyhee near Gold Creek is forecast to flow 24,000 acre feet or 89 percent of average, while downstream the Owyhee nr. Owyhee is forecast to flow 70,000 acre feet which is 81 percent of average.

Plate 11

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE
Wild Horse	33	24	21	17

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

*1943-57 adjusted average

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
1. Owyhee River nr. Owyhee**	70	85	86
2. Owyhee River nr. Gold Creek**	24	29	27

**Corrected for change in storage in Wild Horse Reservoir

SNOW APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD		
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)
Bear Creek	7800	3/28	58	19.8	12.9	21.5*
Big Bend	6700	3/30	32	10.4	T	10.5
Columbia Basin	6650	3/29	29	8.4 ^a	New marker	
Fox Creek	6800	3/28	37	12.6	1.4	9.1*
Fry Canyon	6700	3/30	23	6.9	0.0	9.2
Gold Creek	6600	3/30	26	8.5	0.0	6.0
Jack Creek, Lower	6800	3/27	20	5.8	0.0	2.5
Jack Creek, Upper	7250	3/27	32	10.7	3.4	10.9
Jacks Peak	8420	3/27	74	24.8	14.7	25.4*
Laurel Draw	6700	3/27	35	10.2	0.0	0.8
Midas	7200	3/31	2	0.6	0.0	1.9*
Rodeo Flat	6800	3/30	20	6.2	T	8.7
76 Creek	7100	3/31	33	11.4	3.9	15.7*
Stag Mountain	7700	3/29	14	4.6 ^a	New marker	
Taylor Canyon	6200	3/27	23	6.7	0.0	3.5
Toe Jam	7700	3/29	33	9.6 ^a	New Marker	
Tremewan Ranch	5700	3/30	T	0.0	0.0	0.8

a - Aerial snow depth gage; water content estimated.

SOIL MOISTURE

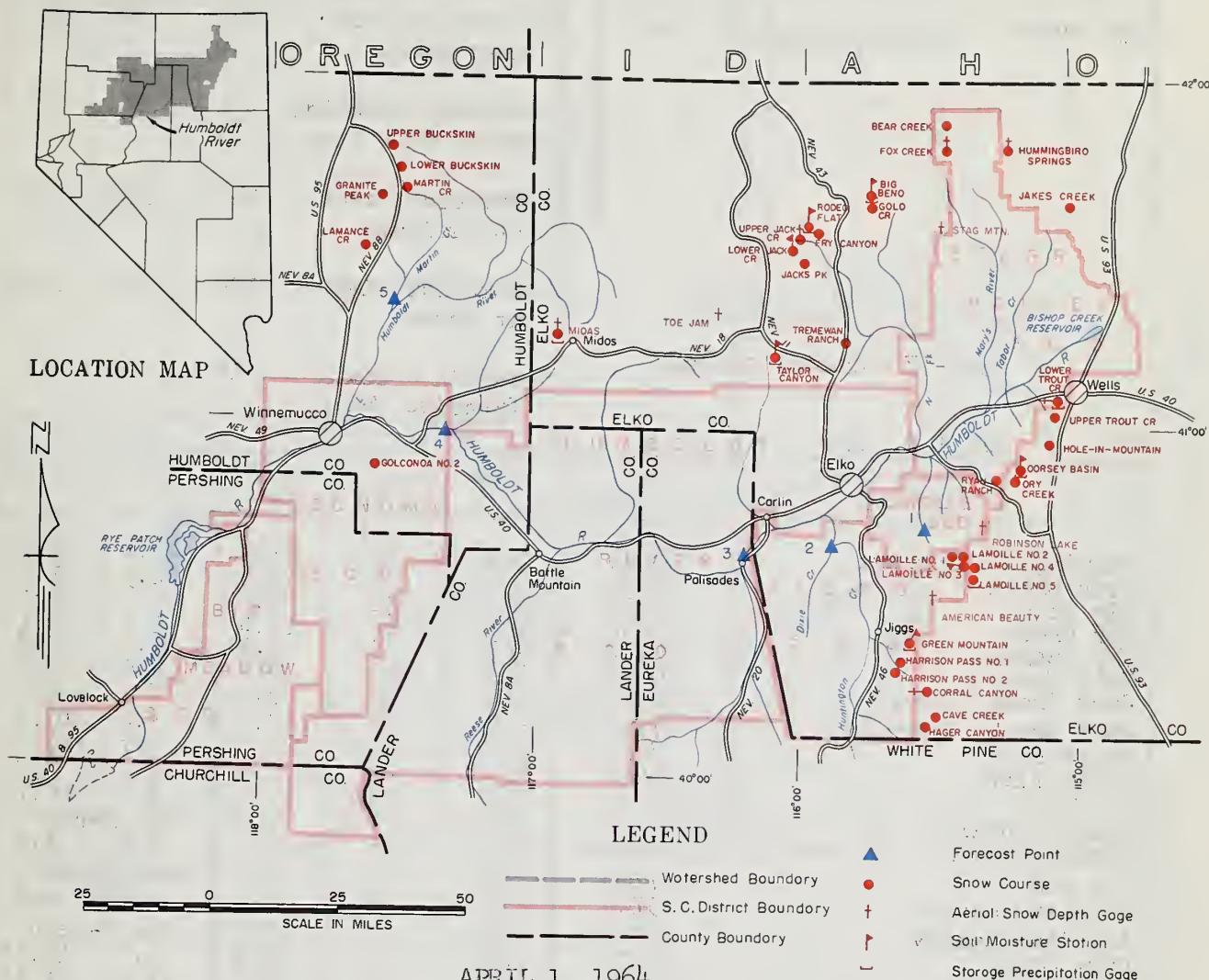
STATION	PROFILE (Inches)			SOIL MOISTURE (Inches)			
	NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR
Bear Creek	7800	72	16.9	2/27	9.9 ^b	7.8	9.6
Big Bend	6700	43	16.7	3/30	15.7	16.0	14.9
Jack Creek, Lower	6800	48	8.7	3/27	8.2	8.3	8.5
Rodeo Flat	6800	42	11.0	c		11.0	11.0
Taylor Canyon	6200	43	15.1	1/27	12.6 ^b	12.6	14.8

b - Nearest current data available
c - Station was moved a short distance uphill last fall. Soil units not yet in equilibrium.

SNOW SURVEY & WATER SUPPLY FORECAST

HUMBOLDT RIVER

CHURCHILL, ELKO, EUREKA, HUMBOLDT, LANDER & PERSHING COUNTIES, NEVADA



APRIL 1, 1964

Humboldt River water users above Carlin will have a good water supply this coming irrigation season. The mountain snowpack in the Ruby Mountains is about 90 percent of average. While the Independence Range to the north of Elko is 90-100 percent of the 15 year average.

Lamoille Creek is forecast to flow 23,000 acre feet during April-July or 82 percent of average. The So. Fork Humboldt is forecast to flow 74,000 acre feet (100%) during the same time period.

The Humboldt at Palisade is forecast to flow 155,000 acre feet which is about 70 percent of average. Water users in the Lovelock area should have a reasonably adequate irrigation water supply. Rye Patch Reservoir held 85,000 acre feet on April 1, 1964 which is 30,000 acre feet less than its 15 year (1943-57) average.

Soil moisture conditions are favorable for a good run of water on the main river when the weather warms and snow melt begins particularly if spring precipitation comes in the form of warm rains.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE
Rye Patch	179	85	84	115

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
1.Lamoille Creek near Lamoille	23	30	28
2.So.Fork Humboldt River near Elko	74	75	74
3.Humboldt River at Palisade	155	216	225
4.Humboldt River at Comus	100	140	143
5.Martin Creek nr. Paradise Valley	14	10	17

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

* 1943-57 adjusted average

SNOW

APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)
					LAST YEAR
Hummingbird Springs	8945	3/28	66	21.1	15.1
Bear Creek	7800	3/28	58	19.8	12.9
Big Bend	6700	3/30	32	10.4	T
Fox Creek	6800	3/28	37	12.6	1.4
Fry Canyon	6700	3/30	23	6.9	0.0
Gold Creek	6600	3/30	26	8.5	0.0
Jack Creek, Lower	6800	3/27	20	5.8	T
Jack Creek, Upper	7250	3/27	32	10.7	3.4
Jacks Peak	8420	3/27	74	24.8	14.7
Rodeo Flat	6800	3/30	20	6.2	T
76 Creek	7100	3/31	33	11.4	3.9
Stag Mountain	7700	3/29	14	4.6a	New Marker
Taylor Canyon	6200	3/27	23	6.7	0.0
Toe Jam	7700	3/29	33	9.6	New Marker
Tremewan Ranch	5700	3/30	T	T	0.0
American Beauty	7800	3/29	30	10.0a	New Marker
Cave Creek	7500	3/29	54	19.2	4.4
Corral Canyon	8500	3/31	50	16.6	11.5
Dorsey Basin	8100	4/2	36	11.2	6.2
Dry Creek	6500	4/2	11	3.5	1.2
Green Mountain	8000	3/26	44	12.8	8.3
Hager Canyon	8000	3/29	48	17.9	9.0
Harrison Pass #1	6600	3/26	28	7.9	0.8
Harrison Pass #2	7400	3/26	29	8.4	1.3
Hole-in-Mountain	7900	3/30	56	22.5	12.0
Lamoille #1	7100	4/1	32	9.7	3.9
Lamoille #2	7300	4/1	31	8.8	3.7
Lamoille #3	7700	4/1	34	11.1	8.8
Lamoille #4	8000	4/1	47	15.5	12.8
Lamoille #5	8700	4/1	63	22.1	20.0
Ryan Ranch	5800	4/2	0	0.0	0.7
Trout Creek, Lower	6900	4/1	12	3.6	0.7
Trout Creek, Upper	8500	4/1	54	17.8	13.3
Midas	7200	3/31	2	0.6	0.0
Golconda #2	6000	3/31	18	6.5	0.0
Buckskin, Lower	6700	3/26	35	10.6	0.0
Buckskin, Upper	7200	3/26	36	10.4	2.4
Granite Peak	7800	3/27	32	9.7	10.4
Lamance Creek	6000	3/27	35	11.4	0.0
Martin Creek	6700	3/26	37	10.2	0.0

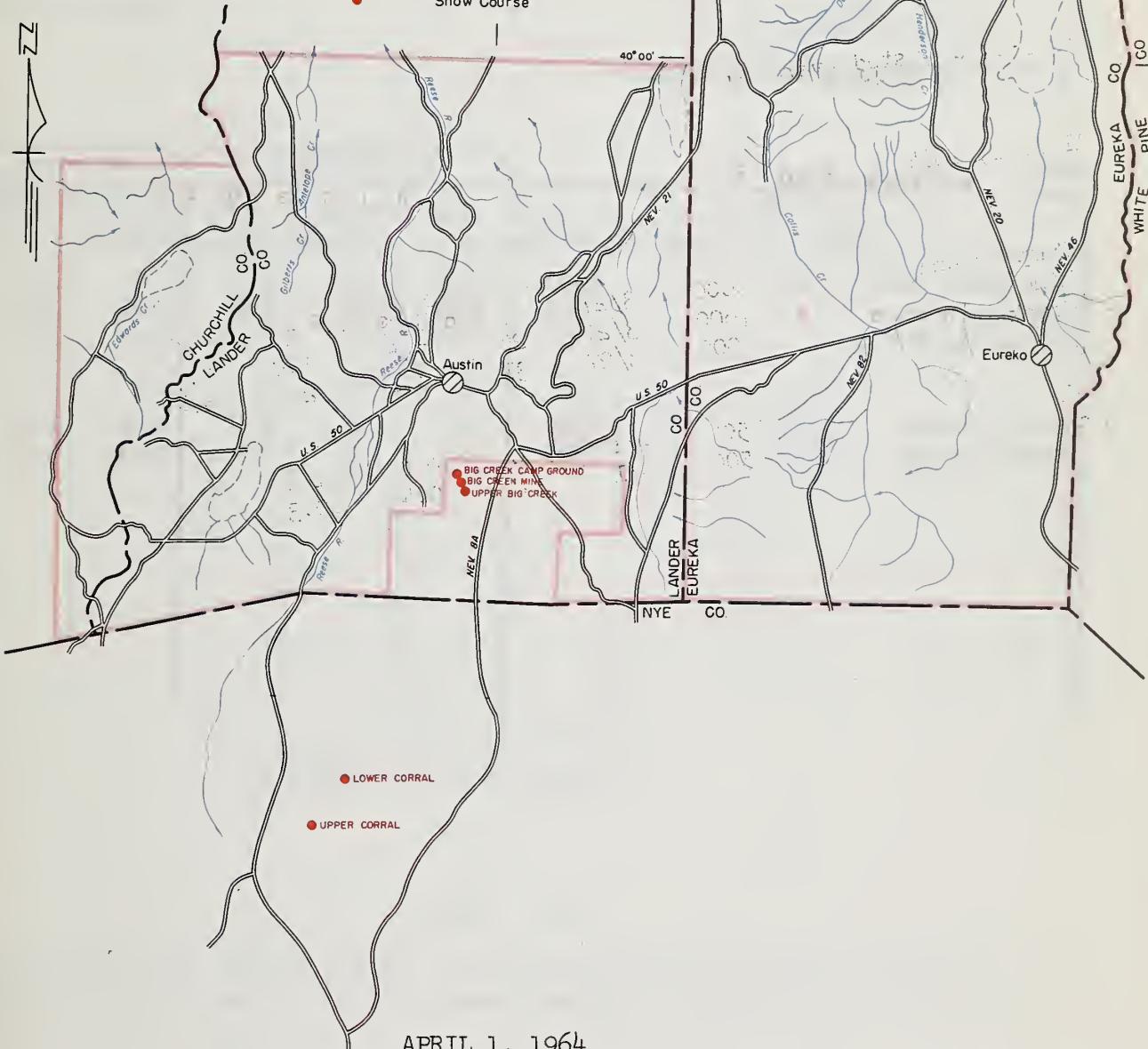
a - Aerial snow depth gage; water content estimated.

SNOW SURVEY & WATER SUPPLY FORECAST

AUSTIN & EUREKA S.C.D.'S., CHURCHILL, EUREKA
& LANDERS COUNTIES, NEVADA



LOCATION MAP



APRIL 1, 1964

Mountain snowpack in the Austin Area is near average this year. Snow surveys on the Big Creek snow courses indicate above average water content. To the south on the Upper Reese River nearly all the snow has melted. The Lower Corral snow course is bare and the upper course is 11 percent of average.

Irrigation season streamflow on Big Creek should be good during the early summer and fair during the later months. Streamflow will be fair to poor on the Reese River this year.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED	
		LAST YEAR	AVERAGE

NOTE :

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

* 1943-57 adjusted average

SNOW

APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION			PAST RECORD				
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR	AVERAGE
Big Creek Camp Ground	6600	3/27	3	1.2	T	1.6		
Big Creek Mine	7600	3/27	26	7.8	1.0	3.7*		
Upper Big Creek	8000	3/27	31	8.2	2.5	8.4*		
Lower Corral	7500	4/1	0	0.0	1.6	1.4*		
Upper Corral	8500	4/1	2	0.4	10.3	3.6*		

Kings River, Paradise Valley &
Quinn River S.C.D.'s.

SNOW SURVEY & WATER SUPPLY FORECAST

KINGS RIVER, PARADISE VALLEY & QUINN RIVER S.C.D.'S.,
HUMBOLDT COUNTY, NEVADA

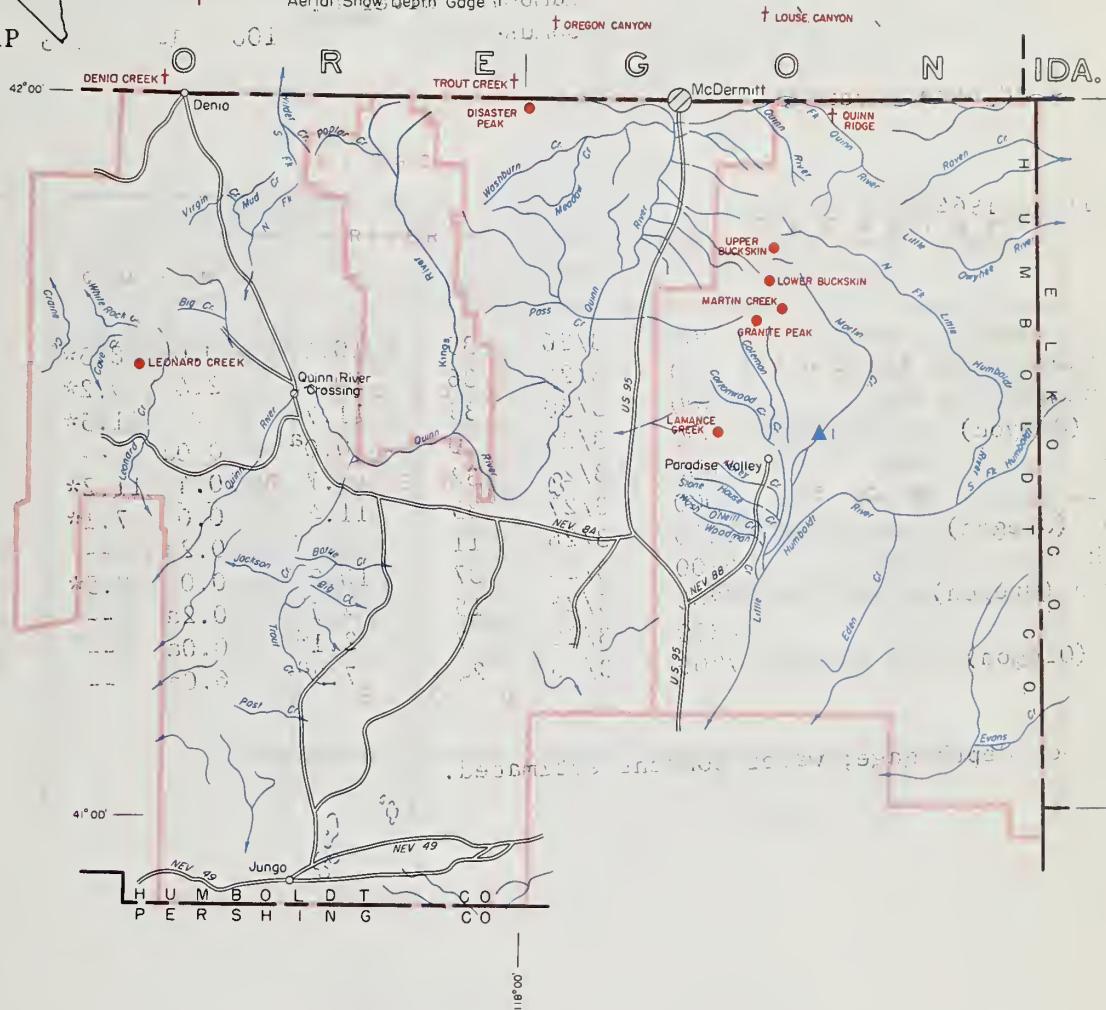


LOCATION MAP

10 0 10 20
SCALE IN MILES

LEGEND

- Watershed Boundary
- S.C. District Boundary
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage



APRIL 1, 1964

Mountain snowpack in the Kings River, Paradise Valley, and Quinn River area ranges from slightly below average to above average. Mountain soil moisture is good.

Streamflow will range from good to fair. Martin Creek is forecast to flow 14,000 acre feet or 82 percent of average assuming normal spring precipitation. Other streams in the Santa Rosas will have flows similar to Martin Creek.

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE
Rye Patch	179	85	84	115

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

*1943-57 adjusted average

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
1. Martin Creek nr. Paradise Valley	14	10	17
Humboldt River at Palisade	155	216	225
Humboldt River at Comus	100	140	143

SNOW APRIL 1, 1964

SNOW COURSE	CURRENT INFORMATION				PAST RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)
Buckskin, Lower	6700	3/26	35	10.6	0.0	8.5*
Buckskin, Upper	7200	3/26	36	10.4	2.4	9.2*
Disaster Peak	6500	3/30	35	11.7	T	11.5*
Denio Creek (Oregon)	6000	3/26	0	0.0 ^a	0.0a	--
Granite Peak	7800	3/27	32	9.7	10.4	11.2*
Lamance Creek	6000	3/27	35	11.4	0.0	7.1*
Locuse Canyon (Oregon)	6440	3/26	11	3.3 ^a	0.2a	--
Martin Creek	6700	3/26	37	10.2	0.0	8.5*
Oregon Canyon (Oregon)	7200	3/26	15	4.5 ^a	0.2a	--
Quinn Ridge	6300	3/26	7	2.1 ^a	0.0a	--
Frout Creek (Oregon)	7800	3/26	24	7.2 ^a	6.0a	--

^a - Aerial snow depth gage; water content estimated.

SNOW SURVEY & WATER SUPPLY FORECAST

VYA & GERLACH S.C.D.'S., NEVADA and SURPRISE VALLEY S.C.D., CALIFORNIA



10 0 10 20
SCALE IN MILES

LEGEND

- Watershed Boundary
- S. C. District Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aeriel Snow Depth Goge

APRIL 1, 1964

March snowfall appreciably improved the water supply outlook in the Surprise Valley area. The coordinated streamflow forecasts of the California Department of Water Resources and Soil Conservation Service Snow Survey units have been revised upward.

Bidwell Creek is forecast to flow 12,500 acre feet during April-September which is 78 percent of the 1943-57 average, Mill Creek, 4,800 acre feet (79 percent average), Deep Creek, 3,200 acre feet (76 percent average), and Eagle Creek 4,500 (78 percent average).

Although the April 1, 1964 snowpack is the second best since 1958, valley precipitation this winter has been below normal as follows:

STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	AVERAGE

NOTE:

All averages based on 1943-1957
15 year period. The forecast period
is from April 1 through July 31.

*1943-57 adjusted average

APRIL - JULY RUNOFF (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	MEASURED LAST YEAR	MEASURED AVERAGE
Bidwell Creek nr.	12.5	13.3	16.0*
Ft. Bidwell			
Mill Creek above all diversions	4.8	5.5	6.1
Deep Creek above all diversions	3.2	4.3	4.2
Eagle Creek near mouth of canyon	4.5	5.2	5.8

Note: April-Sept. forecasts. Coordinated forecasts of SCS and Calif. Dept. of Water Resources Snow Survey Units.

SNOW APRIL 1, 1964

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	AVERAGE
Bald Mountain	6720	3/30	7	2.3	0.0	3.1
Barber Creek (Calif.)	6500	4/2	33	10.4	T	--
Cedar Pass (Calif.)	7100	3/27	44	15.6	3.7	14.1*
Dismal Swamp (Oregon)	7000	3/24	52	18.2 ^a	1.8a	--
Eagle Peak	7200	3/30	42	13.4	3.2	17.9
49-Mtn.	6000	4/3	12	4.3	0.0	--
Hays Canyon	6400	4/3	15	5.3	T	--
Little Bally Mtn.	6000	3/24	8	2.8 ^a	0.0a	--
Reservation Creek (Calif.)	5900	4/2	34	12.0	T	--

a - Aerial snow depth gage; water content estimated.

(Continued from front)

Sept. 1, 1963-March 31, 1964

Average

Sheldon	7.18	7.32
Ft. Bidwell	8.78	12.73
Cederville	5.32	9.28
Surprise Valley	5.63	6.67

The below normal valley precipitation was taken into account in the foregoing forecasts; which explains why these forecasts are lower than the snow data would otherwise indicate.

With average precipitation in April and May the 1964 irrigation water supply will be reasonably adequate in the Surprise Valley area.

The valley will receive moderate and above normal precipitation in June, July, and August. The valley will receive moderate and above normal precipitation in September and October.

Agencies Cooperating in Collecting Data Contained in this Bulletin

FEDERAL

Agricultural Research Service
Army
Bureau of Reclamation
Fish and Wildlife Service
Forest Service
Geological Survey
Navy
Soil Conservation Service
Weather Bureau

STATE

California Cooperative Snow Surveys
California Department of Water Resources
Colorado River Commission of Nevada
Nevada Association of Soil Conservation Districts
Nevada Cooperative Snow Surveys
Nevada Department of Conservation & Natural Resources
Division of Water Resources
Nevada State Forester-Firewarden
Oregon Cooperative Snow Surveys
University of Nevada
White Mountain Research Station, Univ. of California

PRIVATE

Amalgamated Sugar Company
Kennebott Copper Corporation
Nevada Irrigation District
Owyhee Project North Board of Control
Owyhee Project South Board of Control
Pacific Gas & Electric Company
Pershing County Water Conservation District
Sierra Pacific Power Company
Squaw Valley Development Company
Truckee-Carson Irrigation District
Virginia City Water Company
Walker River Irrigation District
Washoe County Water Conservation District

Other organizations and individuals furnish valuable
information for the snow survey reports. Their
Cooperation is gratefully acknowledged.

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